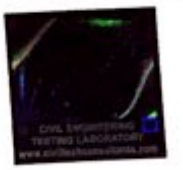
# CIVIL-TECH CONSULTANTS AND ENGINEERS

Building & Highway Material Testing Laboratory

**NABL** - Accredited Laboratory as per ISO / IEC-17025 : 2005


Job No.: CTCE/BBMP/W No.12/BMK/WMM/Gradation/2014-15



12.03.2015

## GRADATION FOR WMM
## MORTH TABLE-400-11

**Client** : **Asst. Executive Engineer,** Shettyhalli Sub Division, BBMP, Bangalore.

**Agency** : **Mr. B. Mohan Kumar**
No. 237, 15th Cross, 2nd Stage, Mahalakshmi Layout, Bangalore.

**Name of Work** : Asphalting to Main & Cross Roads in Janatha Colony, Abbigere in Ward No. 12 in Shettyhalli Sub Division, BBMP, Bangalore.

**Reference** : AEE/SSD/DZ/PR/319/2014-15 Dated: 09.03.2015

Date of Testing : 12.03.2015

Material : WMM

Sample Location : WMM Mix Plant

Oven Dry Wt (gr 26575

| Is Sieve Size in mm | Weight Retained (gm) | Cumulative Weight Retained (gm) | Cumulative % of Retained | Cumulative % of Passing | Spec.Limits |
|---|---|---|---|---|---|
| 53 | 0 | 0 | 0 | 100 | 100 |
| 45 | 718 | 718 | 2.7 | 97.3 | 95-100 |
| 22.4 | 8159 | 8877 | 33.4 | 66.6 | 60-80 |
| 11.2 | 4876 | 13753 | 51.8 | 48.2 | 40-60 |
| 4.75 | 3954 | 17707 | 66.6 | 33.4 | 25-40 |
| 2.36 | 3428 | 21135 | 79.5 | 20.5 | 15-30 |
| 0.600 | 2642 | 23777 | 89.5 | 10.5 | 8-22 |
| 0.075 | 1963 | 25740 | 96.9 | 3.1 | 0-8 |

Note:

1. The report shall not be reproduced, except in full, without the written approval of the laboratory.
2. The results indicated above are based on the tests carried out on the samples collected from the work site.
3. Any Query regarding the report must be reported within 30 days from the date of testing.

Civil Tech Consultants & Engineers Bangalore

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Quality Manager


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Job No.: CTCE/BBMP/W No.12/BMK/WMM/AIV/2014-15

12.03.2015

## Aggregate Impact Value

IS: 2386 Part IV

| | |
|---|---|
| **Client** | **Asst. Executive Engineer,** Shettyhalli Sub Division, BBMP, Bangalore. |
| **Agency** | **Mr. B. Mohan Kumar**<br>No. 237, 15th Cross, 2nd Stage, Mahalakshmi Layout, Bangalore. |
| **Name of the Work** | Asphalting to Main & Cross Roads in Janatha Colony, Abbigere in Ward No. 12 in Shettyhalli Sub Division, BBMP, Bangalore. |
| **Reference** | AEE/SSD/DZ/PR/319/2014-15 Dated: 09.03.2015 |
| **Source / Location** | WMM Plant |
| **Type of Mix** | Wet Mix macadam |
| **Date of Testing** | 12.03.2015 |

| Sl No. | Details | Trial No. 1 | Trial No. 2 | Average |
|---|---|---|---|---|
| 1 | Total weight of aggregate sample filling the cylindrical measure = $W_1$ g | 382 | 385 | |
| 2 | Weight of agregate passing 2.36 mm sieve after the test = $W_2$ g | 81 | 83 | |
| 3 | Weight of aggregate retained 2.36 mm sieve after the test = $W_3$ g | 301 | 302 | |
| 4 | Aggregate Impact value = percent fines | 21.20 | 21.56 | |
| | 100* ($W_2/W_1$)% | | | 21.38 |

Comments:

→ Maximum allowable Aggregate Impact value for Wet mix Macadam is 30%

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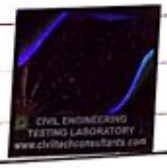
Job No.: CTCE/BBMP/W No.12/BMK/SDBC/Gradation/2014-15 27.03.2015

## GRADATION DETERMINATION OF SEMI DENSE BITUMINOUS CONCRETE MIX

As per IS : 2386 and IRC : SP : 11 - 1984

| | |
|---|---|
| CLIENT | Asst. Executive Engineer, Shettyhalli Sub Division, BBMP, Bangalore. |
| AGENCY | Mr. B. Mohan Kumar<br>No. 237, 15th Cross, 2nd Stage, Mahalakshmi Layout, Bangalore. |
| NAME OF THE WORK | Asphalting to Main & Cross Roads in Janatha Colony, Abbigere in Ward No. 12 in Shettyhalli Sub Division, BBMP, Bangalore. |
| REFERENCE | AEE/SSD/DZ/PR/319/2014-15 Dated: 09.03.2015 |
| SAMPLE I/D | 1st & 2nd Cross, Janatha Colony, Ward No. 12, BBMP |
| DATE OF TESTING | 27.03.2015 |




### GRADATION AFTER EXTRACTION

| Sieve Size in mm | Trail 1 | | | | Specified Limits as per MORTH specification table 500-15 (Grading-2) |
|---|---|---|---|---|---|
| | Weight Retained, gm | % Retained | %Cummulative Retained | % Passing | |
| 13.2 | 0 | 0 | 0 | 100 | 100 |
| 9.5 | 23.61 | 4.97 | 4.97 | 95.03 | 90-100 |
| 4.75 | 248.65 | 52.35 | 57.32 | 42.68 | 35-51 |
| 2.36 | 53.12 | 11.18 | 68.50 | 31.50 | 24-39 |
| 1.18 | 25.78 | 5.43 | 73.93 | 26.07 | 15-30 |
| 0.3 | 58.69 | 12.36 | 86.28 | 13.72 | 9-19 |
| 0.075 | 39.25 | 8.26 | 94.55 | 5.45 | 3-8 |

| Sieve Size in mm | Trail 2 | | | | Specified Limits as per MORTH specification table 500-15 (Grading-2) |
|---|---|---|---|---|---|
| | Weight Retained, gm | % Retained | %Cummulative Retained | % Passing | |
| 13.2 | 0 | 0 | 0 | 100 | 100 |
| 9.5 | 31.25 | 6.58 | 6.58 | 93.42 | 90-100 |
| 4.75 | 254.87 | 53.66 | 60.24 | 39.76 | 35-51 |
| 2.36 | 48.96 | 10.31 | 70.54 | 29.46 | 24-39 |
| 1.18 | 41.52 | 8.74 | 79.28 | 20.72 | 15-30 |
| 0.3 | 34.87 | 7.34 | 86.63 | 13.37 | 9-19 |
| 0.075 | 40.25 | 8.47 | 95.10 | 4.90 | 3-8 |

Civil-Tech Consultants & Engineers Bangalore

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